

~~CONFIDENTIAL~~

26 October 1964

MEMORANDUM FOR THE RECORD

SUBJECT: Trip Report for [REDACTED]

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1. A conference was held on 21 October 1964 with Drs. [REDACTED]. The Microdensitometer study was discussed and the copies of the draft of the first part of the study were available. This draft is completed through chapter four and additional chapters will be added. Copies of the draft were given to TID and ERDL for evaluation by personnel engaged in microdensitometry. Comments and suggestions were requested from the users to provide a guide for final report content of the first portion of the report.

2. Progress to date has been excellent and [REDACTED] felt that the study would be completed on time without additional funds. No overruns are expected and the study will be completed in January 1965. 25X1A

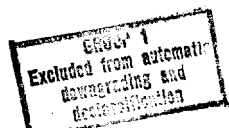
3. Another point of discussion was the interest by [REDACTED] in the following items which would provide more knowledge in the field of microdensitometry. 25X1A

I. General Studies

a. Research into using microspot and laser light sources without a stage plate on the microdensitometer to determine effects of incoherence of light and mis-alignment of optics upon density measurements.

b. Production of a breadboard microdensitometer using a laser, microstage and phototube arrangement to test the feasibility of this approach to microdensitometry.

Declass Review by
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c. Investigation into the possibility of improving the mechanical aspect of microdensitometers.

- 1). Center of rotation
- 2). x and y travel

d. Convenience - possibility of including a visual display of scan. In addition it appears that as the instrument becomes more complex, operator convenience is reduced. This investigation is more aligned with human engineering.

e. A study to resolve the use of optics in microdensitometers -- [REDACTED] insists on using the eyepiece with objectives to obtain field flatness whereas Data uses double tube length without eyepieces.

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f. Additional error analysis for handbook procedures.

g. Updating information on instrumentation and procedures.

h. A study of linearity of electronic response to density.

II. Image Quality

a. Determination of contrast and granularity through the use of random scan techniques -- problem of edge definition.

b. A study of non-symmetrical image distortions as presented by television, fiber optics or as a result of image motion.

III. Density distribution in respect to grain

a. Spatial frequency of grain.

b. Correlation of grain and density.

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IV. Color Photography Research

a. Brightness and Chromaticity with respect to color photography in interpretation.

c. Application of microdensitometer techniques.

4. If there are any of the above subjects of special interest to the Staff, I would be glad to discuss them in more detail.

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[REDACTED]
Development Branch, P&DS